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critical velocities in liquid helium and properties of quantum vortices were reviewed in a paper by V. P. Peshkov. The nature of critical velocities was the subject of papers by V. K. Tkachenko, and of B. N. Yesel'son, Yu. V. Kovdar', and B. G. Lazarev. A communication by G. A. Gamtsemlidze, Sh. A. Dzhaparidze, and Ts. M. Salukvadze was devoted to an attempt at direct observations of coupling between vortex filaments and a solid surface. E. L. Andronikashvili and L. A. Zamtaradze have observed that with increasing rate of rotation, the rate of flow of the helium over the film decreases and reverses sign at a certain angular velocity. Rotating helium is also the subject of a paper by Yu. G. Mamaladze and S. G. Matinyan. Two papers at the conference concerned the propagation of sound in helium, one by A. F. Andreyev and I. M. Khalatnikov on the temperature dependence of the speed of sound in HeII, and one by A. N. Shaanova on the reflection of zero sound from a solid wall. The question of the state diagram of He^3 and He^4 mixtures was considered in the papers of K. N. Zinov'eva and N. G. Bereznyak and of I. V.

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Bogoyavlenskiy and B. N. Yesel'son. A paper by E. L. Andronikashvili, R. A. Bablidze, G. V. Gudzhabidze, L. A. Zamtaradze, Dzh. S. Tsakadze, and G. V. Chanishvili dealt with the influence of rotation on the λ-transition temperature in helium. Dzh. S. Tsakadze talked of the kinetics of formation of the meniscus on the surface of rotating helium.

Different problems connected with superconducting alloys, their properties, preparation, and use for the production of extremely strong magnetic fields were reported in a review article by N. Ye. Alekseyevskiy. N. Ye. Alekseyevskiy, N. N. Mikhaylov, M. N. Smirnova, A. N. Fedotov and S. A. Khromov, and also Yu. F. By*chkov, I. N. Goncharov, V. I. Kuz'min, and I. S. Khukhareva, investigated the influence of heat treatment on the critical parameter of superconducting alloys based on Nb and Zr. N. V. Volkenshteyn and E. V. Galoshina measured the transition temperature of V-Sc alloys. N. Ye. Alekseyevskiy reported an investigation of the magnetic properties of

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Nb alloys, and also the observation of superconductivity in many alloys and compounds. A review paper by A. A. Abrikosov and L. P. Gor'kov was devoted to the theory of superconducting alloys belonging to the second group of superconductors. V. V. Shmidt investigated a model of such a superconductor comprising a dielectric slab threaded longitudinally by thin superconducting filaments. L. P. Gor'kov and A. I. Rusinov investigated the coexistence of superconductivity and ferromagnetism and constructed possible phase diagrams for it. N. Ye. Alekseyevskiy and M. N. Mikheyeva investigated the temperature dependence of the critical current of thin films. Such films have very large critical fields, which do not depend on the film thickness (B. G. Lazarev, Ye. Ye. Semenenko, A. I. Sudovtsev). Another group in Khar'kov (I. G. Yanov, A. A. Maksakova, and O. N. Ovcharenko) measured the critical fields of thin films of niobium and obtained results which agreed with the theoretical calculations. S. Ya. Berkovich and R. A. Chentsov attempted to take account of the influence of the inhomogeneities of real films on the kinetics of the de-

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struction of their superconductivity by means of current. V. P. Galayko investigated theoretically electron paramagnetic resonance in a superconducting film. The properties of hollow superconductors in the magnetic field (with a wall thickness much smaller than the depth of penetration) were considered by G. F. Zharkov and Hsu Lung-tao within the framework of the Ginzburg-Landau macroscopic theory.

N. V. Zavaritskiy reported a detailed tunnel-effect investigation of the anisotropy of the gap in tin. The energy gap in single-crystal tin was investigated also by the ultrasound absorption method (A. G. Shepelev). I. M. Dmitrenko, I. K. Yanson, and V. M. Svistunov investigated the properties of a three-layer superconducting film structure and the possibility of its utilization as a radiation detector in the near and middle infrared regions of the spectrum. N. B. Brandt and N. I. Ginzburg indicated the possibility of the transition of Cd, under hydrostatic compression, into a non-superconducting state without a change in the crystalline structure.

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B. G. Lazarev, L. S. Lazareva, T. A. Ignat'yeva, and V. I. Makarov investigated the influence of pressure and non-magnetic impurities of different valence on the temperature of the superconducting transition of Tl. V. L. Ginzburg made a general theoretical analysis of the influence of pressure on the width of the energy gap. I. A. Privorotskiy undertook an interesting attempt to explain the nonzero Knight shift observed in some superconductors at zero temperature. Closely related to his work is a communication by S. V. Vonsovskiy and M. S. Svirskiy concerning the influence of the singlet or triplet nature of the electron pairs on the state of superconductivity and concerning the conditions under which the formation of such pairs is energetically favored. The external photoeffect on a superconductor was investigated theoretically by V. V. Slezov. The American theoretician P. Hohenberg reported on his investigation of the influence of nonmagnetic impurities on the properties of anisotropic superconductors. Many new interesting effects were observed recently in the behavior of very pure metals in magnetic fields. E. A. Kaner

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and V. F. Gantmakher investigated theoretically and experimentally two effects connected with electrons drifting deep into the surface of a metal. M. Ya. Azbel' calculated theoretically the depth of penetration in a magnetic field parallel and perpendicular to the surface. In another paper, M. Ya. Azbel' and V. G Peschanskiy established that in the presence of open plane Fermi-surface sections, a linear dependence of the resistance of metallic single crystals is possible only in a field parallel to the sample surface, and not in the case of an inclined magnetic field. E. A. Kaner and V. G. Skobov have shown that in a strong magnetic field, when the cyclotron frequency is large compared with the collision frequency, weakly damped electromagnetic excitations of different types exist in metals. The existence of weakly damped electromagnetic waves in metals also leads to many new resonance effects in the propagation of sound (Skobov and Kaner). F. G. Bass, A. Ya. Blank and M. I. Kaganov investigated theoretically the propagation of low frequency electromagnetic waves in a conducting gyrotropic medium under the conditions

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of normal skin effect.

Great interest was aroused by a communication by M. S. Khaykin, L. A. Fal'kovskiy, V. S. Edel'man, and R. T. Mina concerning an investigation of recently discovered magnetoplasma waves. Ye. P. Vol'skiy investigated quantum oscillations of conductivity of single-crystal bismuth and aluminum. Kh. I. Amirkhanov, R. I. Bashirov, Yu. E. Zakiyev, A. Yu. Mollayev, and Z. A. Ismailov measured the quantum oscillations of transverse magnetic resistivity in degenerate electronic samples of antomonides, and arsenides of indium and gallium (in pulsed fields up to 400 kOe). N. B. Brandt reported an investigation of the deHaas-vanAlphen effect in Bi-Se and Bi-Te alloys. The anisotropy of magnetoacoustic oscillations in single-crystal specimens of gallium was investigated by P. A. Bezugly*y, A. A. Galkin, A. I. Pushkin, S. G. Zhevago, and A. P. Korolyuk, and "giant" oscillations of the absorption coefficient of sound in bismuth were observed. Interesting features of "poor" metals of the bismuth type were discussed

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also by A. A. Abrikosov. Ye. V. Potapov investigated experimentally the optical properties of crystalline bismuth and antimony in the infrared region of the spectrum at 2°K. L. A. Fal'kovskiy has shown that spin-orbit coupling is the cause of the appreciable dependence of the g-factor in metals of the bismuth type on the quasimomentum. M. Ya. Azbel' and E. K. Skrotskaya calculated the diamagnetic susceptibility of the electron gas in very strong magnetic fields.

The possibility of the existence of a new type of quantum oscillations in metals was reported by M. Ya. Azbel'. In another report, M. Ya. Azbel' indicated the possibility of observing ordinary quantum oscillations (the deHass-van Alphen effect, the Shubnikov-deHaas effect) at temperatures that are high compared with the distances between the Landau levels, but such that the Larmor radius is of the order of or smaller than the mean free paths of the electrons responsible for the oscillations. The deHaas-van Alphen method can be used in principle to obtain low temperatures (M. Ya. Azbel'). Another theoretical paper (G. A. Gogadze, F. Yu. Itskovich, and I. O.

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Kulik) is devoted to quantum oscillations of the cold-emission current of metals in a magnetic field. Two papers dealt with an investigation of the Fermi surface by the cyclotron resonance method -- studies of the anisotropy of the effective masses of electrons in zinc (V. P. Naberezhny*kh and V. L. Mel'nik) and in aluminum (V. P. Naberezhny*kh, V. L. Mel'nik, I. M. Glazman, A. I. Kononenko). V. G. Peschanskiy and D. S. Lekhtsiyer investigated theoretically the possibility of observing cyclotron resonance in a metal in an inclined magnetic field. The galvanomagnetic properties of Re and Be were discussed in a paper by N. Ye. Alekseyevskiy and V. S. Yegorov. The galvanomagnetic properties of Pd were investigated by N. Ye. Alekseyevskii, G. E. Karstens, and V. V. Mozhayev.

The effect of pressure on the galvanomagnetic properties of Zn and Cd was investigated by Yu. P. Gaydukov and E. S. Itskevich. B. S. Borisov, N. V. Volkenshteyn, P. S. Zy*ryanov, and G. G. Taluts investigated the current-voltage characteristics of bismuth in a magnetic field at helium temperatures. I. O. Kulik investigated the de-

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pendence of the velocity of sound in a metal on the magnetic field and on the frequency of the sound. K. B. Vlasov and B. N. Filippov considered the possible rotation of the plane of polarization of ultrasound in magnetically-polarized metals. A paper by I. M. Lifshits was devoted to an explanation of the structure of the energy spectrum of impurity bands in unordered solid solutions. The absorption of the electromagnetic field by a metal is considered in another paper by I. M. Lifshits (with M. I. Kaganov). V. G. Lazarev, A. I. Sudovtsev, and F. Yu. Aliyev determined by direct measurements the electronic component of the thermal expansion coefficient for iron and nickel. R. N. Gurzhi has shown that at sufficiently low temperatures the interelectron collisions which are not accompanied by umklapp can greatly change the electric conductivity and can lead to a temperature minimum of the resistivity. B. I. Verkin, L. B. Kuzmicheva, and I. V. Svechkarev investigated some electronic properties of indium alloys. A. I. Belyayeva, V. V. Yeremenko, and A. I. Zvyagin investigated the absorption spectra of antiferromagnets.

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L. S. Lukoshkin developed a method for determining some characteristics of the lattice and of the local center in a nonmetallic crystal from the form of the light-absorption bands. A paper by B. L. Timan deals with the absorption of high-frequency transverse sound in dielectrics at low temperatures.

Yu. G. Litvinenko, V. V. Yeremenko, and Yu. A. Popkov investigated the influence of strong magnetic fields (up to 200 kOe) on the absorption structure in the region of the $^6S_{5/2} \rightarrow {}^4G_{3/2}$ transition in MnF_2 crystals below the Neel point for different field orientations. The same authors dealt also with the Zeeman effect in crystals of cadmium sulfide. Yu. A. Bratshevskiy, A. A. Galkin, and Yu. G. Litvinenko reported on resonant absorption in InSb by band carriers. A study of the acousto-electric effect in semiconductors was reported by S. V. Gantsevich and V. L. Gurevich. Two papers by R. N. Gurzhi concerned transport phenomena in solids. The first dealt with the in-

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fluence of anharmonisms of higher order on transport processes in solids. In the second it was shown that collisions between the quasiparticles (phonons, spin waves), not accompanied by umklapp, hinder greatly the process of momentum transfer from the quasiparticle gas to the boundaries in sufficiently large and pure specimens. A. V. Voronel', V. A. Popov, V. G. Simkin, Yu. R. Chashkin, and V. G. Snigirev measured the specific heat of oxygen and argon near the critical point. M. Ya. Azbel', A. V. Voronel', and M. Sh. Giterman proposed a theory for the critical point, in which the initial premises are the experimental data of the preceding work. K. K. Rebane, V. V. Khizhnyakov, and E. D. Trifonov reported a theoretical investigation of the vibrational structure of electron-vibrational bands. A. V. Leont'yeva, A. I. Prokhvatilov, and V. V. Pustovalov studied the temperature dependence of the hardness of polycrystalline methane and ammonia. Neutron diffraction patterns of solid oxygen were discussed by R. A. Alikhanov.

A special session was devoted to cryogenic techniques.

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Great interest was aroused by the paper of B. I. Danilov on the possibility of gas lubrication of a piston of a helium refrigeration motor. Several papers were devoted to hydrogen liquefiers, compressors and vacuum installations, and also to devices used in bubble chambers. A paper by M. P. Orlova, D. N. Astrov, and L. A. Medevedeva dealt with the establishment of a thermodynamic temperature scale in the 4.2--10K range. The secondary instruments were resistance thermometers made of single-crystal germanium doped with antimony, developed by VNIIFTRI in conjunction with GIREDMET. An international comparison of temperature scales was discussed by D. I. Sharevskaya, D. N. Astrov, and M. P. Orlova. The comparison was made at the National Physics Laboratory (England) and at VNIIFTRI. It was established that the discrepancy in electrical measurements made in different laboratories does not exceed 0.002K in its temperature equivalent. In the final plenary session, representatives of individual sections presented reviews of the most interesting communications. In the concluding remarks, the chairman of the Scientif-

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ic Council of the problem of "Low Temperature Physics," corresponding member of the Academy of Sciences SSSR, N. E. Alekseyevskiy, summarized the result of the conference.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00

SUB CODE: GP, NP NR REF SOV: 000 OTHER: 000

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L 13632-66 EWT(d)/EWT(l)/EWT(m)/EPF(n)-2/EWP(t)/EWP(k)/EWP(b)/EWA(c) JJP(c)
ACC NR: AP6001670 SOURCE CODE: UR/0053/65/087/004/0723/0730
JD/WW/JW/HM

AUTHOR: Olekhnovich, N. M.; Anufriyev, Yu. D.; Parshin, A. Ya.

ORG: none

TITLE: Eleventh all-union conference on low-temperature physics

SOURCE: Uspekhi fizicheskikh nauk, v. 87, no. 4, 1965, 723-730

TOPIC TAGS: physics conference, low temperature physics, superconductivity, cryogenic engineering, thermodynamics, liquid helium, solid state physics, heat conductivity, superfluidity, current density, magnetic field, magnetoresistance, crystal anisotropy, thermomagnetic effect, thermal emf

ABSTRACT: The Eleventh All-Union Conference on Low-Temperature Physics was held in Minsk at the Institute of Solid-State Physics and Semiconductors of the Belorussian Academy of Sciences from 27 June through 2 July 1964. More than 400 delegates, including representatives of almost all the organizations in the Soviet Union which are conducting low-temperature research, and scientists from East Germany, Poland, Czechoslovakia, Bulgaria, Hungary, and Yugoslavia, were present. The more than 100 papers presented dealt with the properties of helium, superconductivity, the physical properties of condensed media, low-temperature thermodynamics, cryogenic engineering, and other problems. The chairman of the Scientific Council on Low Temperature Physics, N. Ye. Alekseyevskiy, discussed the state-of-the-art in low temperature physics and remarked on the fruitfulness of conferences in the area as well

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as the necessity for further coordination of the subjects being investigated. A group of Georgian physicists (R. A. Bablidze, G. V. Gudzhabidze, and Dzh. S. Tsakadze), working under the direction of Academician E. L. Andronikashvili, presented a review on the phase transition in rotating liquid helium. The first part of their paper was concerned with the relaxation of quantum eddies. The second part dealt with the generation of vortices during the cooling of rotating He below the λ-point. It was determined that during rotation of He II with an angular velocity corresponding to the maximum of the vortex damping, the disappearance of vortices during transition over the λ-point proceeds very slowly. The time of the formation of vortices was shown to be $\tau = \tau_0 \exp[-(\omega-\omega_{oc})/a]$, where ω_{oc} is the critical angular velocity for a given vessel, ω is the angular velocity of rotation, $\tau \approx 900$ sec, and $a \approx 1.18$ sec^{-1}. It was also determined that the inner surface of the rotating glass does not exert any influence on the formation of the vortex filaments. G. A. Gamtsemlidze reported on results of measurements of the damping of torsional vibrations of a disk in He II after the stopping of the rotating liquid. Khar'kov physicists I. V. Bogoyavlenskiy, N. G. Bereznyak, and B. N. Yesel'son reported on an investigation of the state He^3-He^4 mixtures. They established that in a pressure range from 50 to 140 atm the diagram representing the state of the He^3-He^4 mixture is of peritectic type. L. P. Mezhov-Deglin reported on the thermal conductivity of solid He^4 (whose properties are being intensively studied in Moscow) in a temperature range from 0.5 to 2.5°K and

pressures up to 185 atm. The maximum values for thermal conductivity were approximately three times higher than the best results obtained previously, which attests to the high quality of the crystals investigated. R. N. Gurzhi discussed his theory describing the dependence of thermal conductivity of such crystals on temperature. Kapitsa's jump on the He^4—copper boundary was also surveyed in this work. The superfluidity of the light isotope He^3 was treated in a report by V. P. Peshkov. In experiments with three-staged magnetic cooling of a block of paramagnetic salt, having liquid He^3 in its pores, Peshkov showed that at a temperature of 0.0055° K the specific heat of He^3 has a maximum. Such behavior of the specific heat is attributed to the phase transition of He^3 into a new state. A rather large number of papers was devoted to superconductivity. N. B. Brandt and N. I. Ginzburg investigated the influence of high pressures (up to 30,000 atm) on the superconductivity properties of various metals. The nontransient metals (Cd, Sn, In) display a decrease of T_k when the pressure decreases, while $dH_k/dT|_{T_k}$ remains constant, thus indicating that the density of states N(O) on the Fermi surface is constant. A decrease of T_k at N(O) = const can be linked with a decrease of the electron-phonon interaction parameter in the microscopic theory of superconductivity. Another mechanism apparently takes place in the transition metals (Zt, Ti). Here, an increase in $dH_k/dT_k|_{T_k}$ and T_1 when the pressure increases can be observed. It can thus be concluded that N(O) increases when the pressure increases. T. A. Ignat'yeva, B. G. Lazarev,

L. S. Lazareva, and V. I. Makarov reported on the influence of impurities (Hg, Bi, Sb) on the variation of T_k in thallium under pressure, and on the dependence of the pressure effect on the concentration and valence of impurity atoms. They found that the effect of pressure at a sufficiently large concentration becomes negative independently of the kind of impurity. Yu. Bychkov, I. N. Goncharov, M. Iditominskiy, I. Ruzhichka, and I. S. Khukhareva measured the critical current densities in large magnetic fields on Nb-80% Zr wires subjected to different thermal treatment. A. I. Rusinov and Ye. A. Shapoval discussed the dependence of the energy gap of a superconductor and of the depth to which a magnetic field penetrates into it on the magnitude of the field in the case of the mirror reflection of electrons from the surface of metals. The extreme cases of absolute zero and temperatures close to T_k were investigated for Pippard and London superconductors. Also obtained for Pippard metals ($\varkappa^2 \ll 1$) were formulas for a temperature range not too close to T_k ($\varkappa^2 \ll 1 - (\frac{T}{T_k}) \ll 1$), where a non-localizable situation occurs. In a region of localizability, the results coincide with the Ginzburg-Landau theory. In previous theoretical works, R. N. Gurzhi predicted that at low temperatures, when the probability is small of collisions occurring between the excitation sources (electrons and phonons) associated with the processes of transfer, the transfer phenomena can display a series of interesting peculiarities. Gurzhi presented two more reports on this subject at the

conference. In one report, the high-frequency properties of very pure metals were investigated at low temperatures. Apparently, electron-phonon processes not associated with transfer processes exert a substantial influence on the skin-effect. In particular, a wide range of frequencies appears in which the surface impedance depends on the frequency and the temperature, unlike the general cases of normal and anomalous skin-effect. V. L. Gurevich, V. M. Muzhdaba, R. V. Parfenyev, Yu. A. Firsov, and S. S. Shalyt submitted a report on the experimental observation of a new type of oscillations of magnetoresistance of indium electron antimonide. The physical basis of this phenomenon is associated with a resonance scattering of the current carriers on optical phonons in strong magnetic fields $\Omega\tau >> 1$, where Ω is a cyclotron frequency and τ is the relaxation time of conduction electrons. On diagrams of the transverse and longitudinal magnetoresistances, the authors discovered a series of oscillation extremums periodic with the reverse field. The period of the oscillations is in a good agreement with the theoretical formula. L. E. Gurevich and B. L. Gel'mont established that in metals and semimetals when there is a temperature gradient a new type of wave appears at low temperatures, the so-called thermomagnetic waves (TMW). TMW were investigated both in the presence and in the absence of an external field. The conditions for a weak attenuation without a magnetic field were found. When an electromagnetic wave is incident on a body which has a temperature gradient, the refracted wave can become an amplifying wave if there is a magnetic

field. The anisotropy of the Mossbauer effect on single crystals of white tin was investigated by N. Ye. Alekseyevskiy, A. P. Kir'yanov, Yu. A. Samarskiy, and V. I. Nizhankovskiy. Their data confirmed the previously observed change in the anisotropy of the effect with temperature. They also measured chemical shifts of the Mossbauer line in different intermetallic compounds of tin within a wide range of temperatures. V. A. Bryukhanov, N. N. Delyagin, and V. S. Shpinel' also measured the chemical shift by means of the Mossbauer effect method and calculated the change in electron density in Sn^{119} nuclei by introducing them into different metal sheets as an impurity. In their opinion, a relationship exists between the electron density in the nucleus of the impurity atom and the dynamic characteristics of the sheet. L. E. Gurevich and I. Ya. Korenblit studied the thermal emf of ferromagnetic metals at low temperatures. Longitudinal and transversal thermal emf were investigated in a range of magnetic fields and temperatures in which an exchange member played the basic role in magnon energy and the magnons were scattered primarily by electrons. A dependence of thermal emf on temperature was determined. Two reports dealt with superconductive resonators which can be used for acceleration. B. I. Verkin, O. N. Dmitrivenko, V. M. Dmitriyev, G. Ye. Churilov, and Yu. M. Borodavko reported on an investigation of superconductive resonators of the 3-cm range prepared from lead by various means. I. S. Sidorenko and Ye. I. Revutskiy investigated the

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high-frequency properties of lead superconductive films deposited on current-carrying surfaces of copper resonators. [FSB: v.2, no. 2]

SUB CODE: 20 / SUBM DATE: none

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PESHKOV, V.P.; PARSHIN, A.Ya.

Superconducting thermal switches. Zhur. eksp. i teor. fiz. 48 no.2:393-403 F '65. (MIRA 18:11)

1. Institut fizicheskikh problem AN SSSR.

PARSHIN, B. I.: Master Tech Sci (diss) -- "[illegible] of [illegible] - [illegible] - [illegible] (lowering) [illegible] [illegible] - [illegible] - [illegible] structures". Moscow, [illegible] (Min Higher Educ USSR, Moscow [illegible] Lenin Power Engineering Inst), [illegible] (KL, [illegible])

PARSHIN, I. A.

Parshin, I. A. - "Investigation of the planet Venus in 1948", Vestnik Leningr. un-ta, 1948, No. 12, p. 144-46.

SO: U-4631, 16 Sept. 53, (Letopis 'nykh Statey, No. 24, 1949).

PARSHIN, I.A.

Absolute photometry of the planet Venus. Vest.Len.un 9 no.5:85-95 My '54.(Venus (Planet)--Spectra) (Photometry,Astronomical)(MIRA 9:7)

PARSHIN, I.A.

Absolute reflecting capacity of the planet Venus. Astron.tsir. no.145:12-13 Ja '54. (MLRA 7:6)

1. Astronomicheskaya Observatoriya Leningradskogo Gosudarstvennogo Universiteta. (Venus (Planet))

PARSHIN, I.A.

Effect of photographic irradiation on the phase of a planet. Astron.tsir. no.158:10-11 Ap '55. (MLRA 8:9)

1. Astronomicheskaya observatoriya Leningradskogo Gosudarstvennogo universiteta.
(Planets--Brightness) (Astronomical photography)

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Meeting on future observations of Mars at opposition near perihelion in 1956. Vest.Len.un. 10 no.11:153-154 N '55. (MLRA 9:3)
(Mars (Planet))

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(Leningrad--Astronomy--Congresses)

PARSHIN, I.A.

Conference on the nature of the moon and planets. Astron. (MLRA 9:12)
teirk. no.171:29-30 Jl '56.

(Solar system)

L 24410-65 EWT(1)/EWG(v)/EEC(t)/EEC(b)-2 Pc-4/Pe-5/Pi-4/Pae-2 IJP(c)
GW

ACCESSION NR: AT5001341 S/2703/64/000/323/0125/0135

B+1

AUTHOR: Parshin, I. A.

TITLE: Experience in the study of the polarization of light from the moon, terrestrial rocks and meteorites

SOURCE: Leningrad. Universitet. Uchenyye zapiski, no. 323, 1964. Seriya matematicheskikh nauk, no. 37. Trudy astronomicheskoy observatorii, v. 20, 125-135

TOPIC TAGS: moon, light polarization, meteorite, terrestrial rock, lunar surface, telescope

ABSTRACT: In order to determine the nature of various parts of the lunar surface it is of great importance to study the polarization of light from details of the lunar disk and compare these data with similar data for terrestrial rocks. The author reports on his investigations of the polarization of light from terrestrial rocks, meteorites and the lunar surface. In a study of the lunar polarization it is important to use a telescope which is free from parasitic polarization caused by light reflection from mirror surfaces, and therefore a refractor is superior to a reflector. The telescope used was the refractor of the astronomical observatory at Leningradskiy gosudarstvennyy universitet (Leningrad State University) (225-mm

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objective, 3,200-mm focal length). The results reported confirm earlier conclusions that the polarization of lunar light is a function of phase angle. Table 1 in the text gives data on polarization of 19 features on the lunar surface. The degree of polarization for the seas, having a dark surface, is greater than for the continents. Maximum polarization for the seas is 28%; for the continents, it is 23%. A special laboratory apparatus was used to study the polarization of light from rocks and meteorites. It consisted of a small circular box filled with sand, rotating on its axis; the sample was placed in this box. Smooth surfaces of the samples were illuminated by an incandescent bulb. The polarizing effect of 32 terrestrial rocks and 6 meteorites was measured. The curves of polarization were in general qualitatively the same as for lunar features. With an increase of phase angle and degree of polarization increases gradually, attains a maximum and then decreases. The degree of polarization of light from most rocks is considerably greater at the maximum than is true for lunar features; the degree of polarization is usually displaced in comparison with lunar features by 20-30° in the direction of greater phase angles. Measurement of the polarization of light reflected from meteorites has shown that the molten crust has a very high polarizing activity and the natural discontinuity is approximately the same as for terrestrial rocks. The studied polarization curves indicate no similarity between the investigated rocks and meteorites and the lunar surface.

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Orig. art. has: 1 formula, 1 figure and 5 tables.

ASSOCIATION: Astronomicheskaya Observatoriya, Leningradskiy universitet (Astronomical observatory, Leningrad university)

SUBMITTED: 00 ENCL: 00 SUB CODE: AA, ES

NO REF SOV: 007 OTHER: 005

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PARSHIN, L.A. [deceased]

studying the polarization of light reflected from the moon, [illegible] terrestrial rocks and meteors. Uch. zap. [illegible]

PARSHIN, I.A.

Professor V.V.Sharonov; on the occasion of his 60th birthday and the 40th anniversary of his scientific and pedagogical work. (MIRA 15:1)
Astron.tsir. no.223:30 Jl '61.
(Sharonov, Vsevolod Vasil'evich, 1901-)

PARSHIN, Igor' Aleksandrovich; NEL'NIKOV, O.A., prof., nauchnyy red.; UTA'TSOV, O.A., red. izd-va; GUDZHIYEVA, A.M., tekhn. red.

[In the world of the planets] V mire planet. Leningrad, Vse-vo po rasprostraneniiu polit. i nauchn. znanii RSFSR, 1961. 50 p. (MIRA 15:5)

1. Chlen-korrespondent Akademii nauk SSSR (for Nel'nikov).
(Solar system)

PARSHIN, I.A.

Absolute photometry of the twilight sky and noctilucent clouds. Issl. ser. obl. no.1:77-84 '60. (MIRA 14:8)
(Twilight)
(Clouds)
(Photometry, Astronomical)

29882
S 169/61 000/009/041/056
D228/D304

3,5120

AUTHOR: Parshin, I. A.

TITLE: Absolute photometry of the crepuscular sky and noctilucent clouds

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 9, 1961, 17, abstract 9G143 (V sb. Issled. serebristykh oblakov, no. 1. L., Leningrad. un-t, 1960, 77-84)

TEXT: Photometric observations of the crepuscular sky and noctilucent clouds, undertaken in the summer of 1959 at the atmospheric-optics station of the Astronomicheskaya observatoriya Leningradskogo universiteta (Astronomic Observatory of Leningrad University), are described. The aim of the photometric observations of the crepuscular segment was to obtain the distribution of the brightness, expressed in absolute units, for different depths of the sun's sinking below the horizon. A refractor with a geniculate optical axis--having a lens diameter of 55 mm and a focal length of 550 mm--was used in the work. For brightness measurement, points were

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chosen on the celestial sphere at verticals across 10° in azimuth ($\Delta = 10, 20, 30, 40^{\circ}$) to the east and west of the vertical situated beneath the sun's horizon and across 5° in elevation (to the elevation $h = 50^{\circ}$). A wedge photometer was mounted on the refractor's ocular tube. The ratio of the brightness of the sky to that of a standard light-source, whose absolute brightness value was known was determined in order to express the brightness of the crepuscular sky in laboratory units of brightness---in nitids. The processing of the obtained material was carried out according to the formula

$$\lg B = \lg B_{sr} + q(n_1 - n_2) - D_{fsr} + D_{fsk}$$

where B is the sky's brightness in nitids, B_{sr} is the brightness of the standard, q is the constant of the photometer's wedge, n_1 is the reading on the wedge's scale when observing the sky, n_2 is the reading on the wedge's scale when observing the brightness standard, D_{fsr} is

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Absolute photometry of . .

the optical density of the gray light-filter employed when observing the brightness standard, and D_{fsk} is the optical density of the gray light-filter used when observing the sky. Very bright noctilucent clouds were observed in a cloudless sky on July 16, 1959. They had the form of bands with multiple hackles and eddies. The brightness measurements of noctilucent clouds were carried out with the same equipment, by which the observations of the crepuscular sky were made. The apparent brightness of a noctilucent cloud is composed of the true brightness---caused by the dispersion of light in the cloud--and the brightness of the background sky, which is superimposed on the cloud's true brightness. For the latter's calculation, the brightness of sky points located near the cloud's upper and lower boundaries as measured. The half-sum of the brightnesses which was calculated from the apparent brightness in order to obtain the cloud's true brightness was taken from the derived values. The method of photometric standardization, in which the area of the moon's surface near the point of intersection of the bright arc of the limb with the equator of intensity was taken as the brightness standard, was applied in respect of noctilucent clouds. Computation of the visible albedo

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Absolute photometry of .

A_c of noctilucent clouds was made by the formula:

$$A_c = A_l \left(Q^{x_c - x_l} \cdot Q^{x_{sk} - x_l}\right) \frac{T_l}{T_c}$$

where $Q = 10^q$, A_l is the moon's visible albedo, x_{sk} is the scale reading at the time of sighting on the sky's background, x_c is the scale reading when sighting on noctilucent clouds, x_l is the scale reading when sighting on the moon's limb, T_l is the passage coefficient of the light-filter employed to measure the brightness of the moon's limb, and T_c is the passage coefficient of the light-filter used for measuring the brightness of the noctilucent clouds and sky. The absolute value for the brightness of noctilucent clouds--expressed in nitids--was obtained through multiplying the magnitude of the visible albedo by the

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Absolute photometry of . .

brightness value of an absolutely white surface situated normal to the solar rays (in the case of noctilucent clouds, this value equals 41,600 nit). [Abstracter's note: Complete translation.]

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PARSHIN, Igor' Aleksandrovich; SHARONOV, V.V., prof., red.; SAMSONENKO, L.V., red.; AKSEL'ROD, I.Sh., tekhn.red.

[The moon] Luna. Pod red. V.V.Sharonova. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 53 p. (Populiarnye lektsii po astronomii, vyp.10). (MIRA 14:1)
(Moon) (Lunar probes)

PARSHIN, I.A.

[The planet Venus in the light of recent research] Planeta Venera v svete noveishikh issledovanii. Leningrad, 1958. 33 p. (MIRA 13:12)

(Venus (Planet))

[illegible] EXPLORATION [illegible]

Parshin, Igor' Aleksandrovich

Luna (The Moon) Moskva, Izdatel'stvo, [illegible] p. (Series: Iskusstvennyye sputniki i astronomiya, vyp. [illegible], [illegible] copies printed. [Kerosky]

Ed. (Title page): A.V. Sharonov, Professor; Ed. (Inside book): L.V. Samsonenko, Tech. Ed.: I.Sh. Aksel'rod.

PURPOSE: This book is intended for the general reader interested in the study of the moon.

COVERAGE: The book discusses the physical nature of the moon and the motion of the moon as a celestial body. The author deals with the measurement of distance from the earth to the moon and the motion of the moon through the skies. He also describes the structure of the moon's surface, the lunar seas, mountains, craters, and other landforms. No personalities are mentioned No references are given.

TABLE OF CONTENTS:

Foreword
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69864
SOV/35-59-9-7235

3.1550
Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 58 - 59 (USSR)

AUTHOR: Parshin, I.A.

TITLE: A Preliminary Communication About the Photographic Observations of Mars During the Period of the Great Opposition in 1956.

PERIODICAL: Astron. tsirkulyar, 1958, August 26, Nr 194, pp 6 - 7

ABSTRACT: Photographic and visual observations of Mars were carried out with the normal astrograph of the Tashkent Observatory by the expedition of the Astronomic Observatory of the Leningrad University. The examination of 111 negatives and drawings, obtained with the aid of a guide with a magnification of 200X has shown the clear visibility of the South polar cap in mid-August. On photographs taken up to August 28 inclusively, it had a greater brightness and larger dimensions in violet rays (430 mμ) than in green (545 mμ) and red (630 mμ) rays. From August 30 the polar cap stopped being visible; on September 9 it appeared once again in the form of an indistinct object encircled by a faint rim. The visual and photographic observations show that certain regions on Mars, situated in

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A Preliminary Communication About the Photographic Observations of Mars During the Period of the Great Opposition in 1956

the Southern hemisphere, were unusually bright, and moreover, their brightness changed visibly with time. So from August 26 to 29 inclusively, the Argyre and Noachis regions were anomalously, extremely bright. Since the relation of the brightness of these regions and the polar cap in various sections of the spectrum was different, the author concluded that the nature of the bright cover which stipulated the brightening of Argyre and Noachis is different from the nature of the polar cap. After August 30 the contrast degree of individual details decreased as a result of a yellow haze in the atmosphere of Mars. A morning rainbow is visible on photographs taken in violet rays from August 19 to 30. It is a bright diffusion band on the edge of the disk, being formed during sunrise.

N.B. Perova

Card 2/2

PARSHIN, I.A.

Observations of the partial lunar eclipse of March 24-25, 1959, in Petrodvorets. Astron.tsir. no.202:3 Je '59. (MIRA 13:4)

1. Astronomicheskaya observatoriya Leningradskogo universiteta. (Eclipses, Lunar--1959)

69864
SOV/35-59-9-7235

B. 1550
Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 58 - 59 (USSR)

AUTHOR: Parshin, I.A.

TITLE: A Preliminary Communication About the Photographic Observations of Mars During the Period of the Great Opposition in 1956.

PERIODICAL: Astron. tsirkulyar, 1958, August 26, Nr 194, pp 6 - 7

ABSTRACT: Photographic and visual observations of Mars were carried out with the normal astrograph of the Tashkent Observatory by the expedition of the Astronomic Observatory of the Leningrad University. The examination of 111 negatives and drawings, obtained with the aid of a guide with a magnification of 200X has shown the clear visibility of the South polar cap in mid-August. On photographs taken up to August 28 inclusively, it had a greater brightness and larger dimensions in violet rays (430 mμ) than in green (545 mμ) and red (630 mμ) rays. From August 30 the polar cap stopped being visible; on September 9 it appeared once again in the form of an indistinct object encircled by a faint rim. The visual and photographic observations show that certain regions on Mars, situated in

C Card 1/2

PARSHIN, I.A.

Preliminary information on photographic observations of Mars during the favorable opposition of 1956. Astron. tsir. no.194:6-7 Ag '58. (MIRA 12:12)

1.Astronomicheskaya observatoriya Leningradskogo universiteta.
(Mars (Planet)--Opposition, 1956)

PARSHIN, I.A.

Studies of Venus in 1948. Vest. LGU 3 no.12:144-146 D '48. (MIRA 12:9)
(Venus (Planet))

PARSHIN, I.A.

Expedition of the Leningrad State University for observing the planet Mars during the great opposition of 1956. Vest. LGU 12 no.13:190-191 '57. (MIRA 10:11)
(Mars (Planet)--Opposition, 1956)

KRONGAUZ, A.N.; SHOTOV, D.A.; PARSHIN, I.M.

[Condensation dosimeter for X-ray and Gamma-radiation] Kondensatornyi dozimetr dlia rentgenovskogo i gamma-izlucheniia. Moskva, Medgiz, 1955. 6 p. [Microfilm] (MLRA 8:10)
(X-rays--Apparatus and supplies) (Gamma rays)

LAGUNOVA, I.G.; KOZLOVA, A.V.; PERVOVA, A.K.; RIMMAN, A.F.; DMOKHOVSKIY, V.V.; PARSHIN, I.N.

Rational system of planning a department and protection during work with closed radioactive preparations. Med.rad. 7 no.6:69-76 Je '62. (MIRA 15:8)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta Ministerstva zdravookhraneniya RSFSR i Moskovskoy gorodskoy bol'nitsy No.40.
(RADIOLOGY, MEDICAL--SAFETY MEASURES)

KRONGAUZ, A.N., PARSHIN, I.M., PROKSH, V.N., GROMOV, Yu.D., YAKUNIN, V.F.

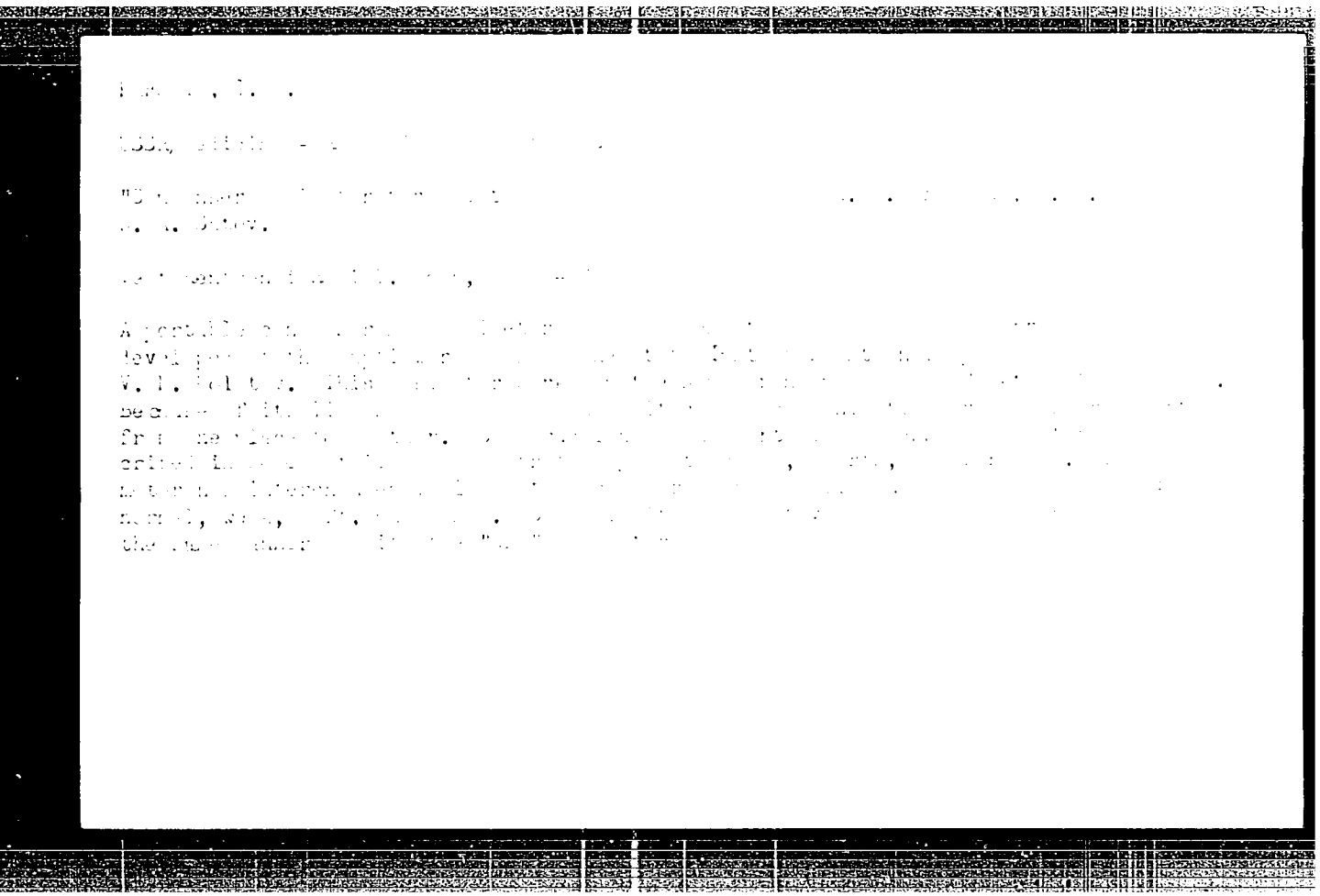
Universal condenser dosimeter for roentgen and gamma irradiations. Vest. rent. i rad. 37 no.[illegible] S-O '62. (MIRA 17:12)

1. Iz dozimetricheskogo otdela (zaveduyushchiy - dotsent A.N. Krongauz) i eksperimental'nykh masterskikh (direktor I.M. Parshin) Gosudarstvennogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta (direktor - prof. I.G. Lagunova).

PERESLEGIN, I.A.; KORNEV, I.I.; PARSHIN, I.M.

Improved rotary chair for GUT-Co-400 equipment. Vest.rent.i rad. 35 no.1:50-51 Ja-F '60. (MIRA 13:6)

1. Iz radiologicheskogo otdela (zav. - prof. A.V. Kozlova) i eksperimental'nykh masterskikh (dir. D.S. Zhukhanenko) Gosudarstvennogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta (dir. - dotsent I.G. Lagunova) Ministertva zdravookhraneniya RSFSR.
(RADIOTHERAPY equip. & supply)



L 29612-66 EWP(c)/EWP(k)/EWT(d)/EWT(m)/T/EWP(l)/EWP(w)/EWP(v)/EWP(t)/ETI IJP(c)
ACC NR: AP6018716 (N) EM/JD SOURCE CODE: UR/0193/66/000/004/0030/0031

AUTHOR: Beda, P. I.; Parshin, I. P.

66
B

ORG: none

TITLE: Eddy-current flaw detectors 14

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 4, 1966, 30-31

TOPIC TAGS: heat resistant material, material flaw, flaw detector, eddy current flaw detector, turbine blade flaw, surface flaw, surface crack, turbine blade defect, aircraft engine, engine inspection/VDZL-64 flaw detector, VDZL-65 flaw detector, VDL-2M flaw detector, VDTs-1 flaw detector

ABSTRACT: Several new eddy-current flaw detectors have been developed recently at an unidentified plant. The VDZL-64 flaw detector is intended to trace surface defects, primarily fatigue cracks, in parts made of nonmagnetic heat-resistant materials, such as turbine blades. It reveals surface cracks as small as 0.6 x 0.15 x 0.005 mm in size. Two opposite slots of a blade are tested simultaneously. The VDZL-65 flaw detector is similar to the VDZL-64 and has the same sensitivity, but it tests simultaneously three upper slot pairs. The VDL-2M flaw detector traces cracks in heat-resistant nonmagnetic materials with 0.5—1 m/ohm·mm^2 electric conductivity and in thin edges of enameled and bare turbine blades, nozzles, etc. It reveals cracks with a depth of 1 mm or more. The VDTs-1 flaw detector is a universal instrument which

Card 1/2 UDC: 620.179.1:538.54

Card 2/2 UV

BEDA, P.I.; PARSHIN, I.P.

The VDEL-64 electroinductive flaw detector for testing slots in turbine bladed. Zav.lab. 31 no.10:1263-1264 '65. (MIRA 19:1)

PARSHIN, I. P., Engineer

"Investigation of Temperature, Speed, and Dynamic Relations, as Well as Regularities of Tool Wear in Gear Milling." Sub 26 Nov 51, Military Order of Lenin Academy of Armored and Mechanized Troops of the Soviet Army imeni I. V. Stalin

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 486, 9 May

9. Monthly List of Russian Accessions, Library of Congress, [illegible] 19[illegible], Uncl.

L 3855-66 EWT(d)/EWT(m)/EWP(w)/EWP(f)/EWP(c)/EWP(v)/T-2/EWP(k)/EWP(l)/ETC(m)
WW/EM

ACCESSION NR: AP5024826 UR/0032/65/031/010/1263/1264
620.179.1-1.05

52
B

AUTHOR: Boda, P. I.; Parshin, I. P.

TITLE: The VDZL-64 electric induction flaw detector for inspection of vane channels

SOURCE: Zavodskaya laboratoriya, v. 31, no. 10, 1965, 1263-1264

TOPIC TAGS: turbine blade, flaw detection, metal inspection

ABSTRACT: The article is a description of the VDZL-64 flaw detector patented in 1962 (Author's Certificate No. 156735 published in *Byulleten' izobreteniy* No. 16, 1963). The instrument is designed for detection of surface flaws in nonmagnetic refractory materials in the lock channels of turbine blades in power machines. The instrument is sensitive to surface cracks 0.6 mm long and 0.15 mm deep with an opening of 0.0005 mm and greater. The device also detects subsurface nonmetallic inclusions to a depth of 1 mm. The flaw detector weighs approximately 20 kg, operates from a 220/127 v, 50 cps or 115 v, 400 cps power supply and generates eddy currents with a frequency of 300 kc. The device operates on the principle of comparing two symmetrically located channels on a single blade using two induction coils connected

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L 3855-66

ACCESSION NR: AP5024826

in resonance circuits in a differential measurement system. The output signal, which is proportional to the difference in the voltages of the tank circuits, is fed to a microammeter with a 200-0-200 scale. A flaw in any of the channels being inspected changes the impedance of the pickup, which alters the voltage in the corresponding tank circuit, i. e. the measurement circuit is thrown out of balance. The direction of needle deflection indicates which channel has the flaw. A detailed description of the mechanical part of the instrument is given with illustrations. Operational experience with the flaw detector has shown that it is an effective tool for revealing dangerous flaws in vane channels. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: IE

NO REF SOV: 003 OTHER: 000

Card 2/2

DANIYELYAN, A.M. doktor tekhn.nauk, prof., zasluzhennyy deyatel' nauki i tekhniki RSFSR; PARSHIN, I.P., kand.tekhn.nauk, dotsent

Effect of the material of the cutting part and the cross section of the cutting tool on thermal deformations of the tool. Trudy MVTU no.53 5-7 '62. (MIRA 15:6)

(Metal-cutting tools—Testing)

PARSHIN, L.F., inzh.

Calculating prestressed reinforced concrete cross bars for the framework of ore-dressing plant buildings. Shakht. stroi. no.7: 15-19 '58. (MIRA 11:9)
(Prestressed concrete) (Reinforced concrete construction)

1. PAKHLIN, K.I.

2. USSR (600)

4. Medicine, Industrial

7. Work experience of the [illegible] division of the medical [illegible] department at the Orekhovo-Zuyevo Cotton Combine, Gig. i prav. tr. no. [illegible], 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Unclassified.

PAVLIN, K.I., zasluzhennyy vrach; POMERANTSEV, A.I.; [illegible]; POMORTSEVA, M.F. [illegible]

[illegible]

1. Iz [illegible] (zav. - zasluzhennyy [illegible] Ye.). Orlovo-Zuyevskogo [illegible] kombinata (glavnyy [illegible] Ye.). Orlovo-Zuyevo.

(TEXTILE WORKERS--DISEASES AND HYGIENE)
(RHEUMATISC FEVER)

STETSYUK, L.; PARSHIN, M.; YEPIFANTSEV, A.

Traffic organization and safety. Avt.transp. 42 no.1:44-45 Ja '64. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut avtomobil'nogo transporta.

STETSYUK, L.S.; PARSHIN, M.A.; KARPINSKAYA, I.M.; YEPIFANTSEV, A.T.; DEBERDEYEV, B.S., red.; BODANOVA, A.P., tekhn. red.

[Road adhesion of wheels and traffic safety] Stseplenie kolesa s dorogoi i bezopasnost' dvizheniia. Moskva, Avtotransizdat, 1963. 66 p. (MIRA 17:3)

STETSYUK, L.S.; PARSHIN, M.A.

Cohesion properties of the pavement and traffic safety on highways.
Avt.dor. 25 no.9:3-5 S '62. (MIRA 15:9)
(Traffic safety) (Pavements)

KLINKOVSHTEYN, G.I., kand. tekhn. nauk,; AKSENOV, V.A., inzh.;
SAMKIS'YANTS, E.G., inzh.; SHUMOV, A.V., inzh.;
MANUSADZHYANTS, Zh.G., inzh.; TROSHINA, M.Ya., inzh.;
STETSYUK, L.S., inzh.; FAMSHIN, M.A., inzh.; KAFFINSKAYA,
I.M., inzh.; FAL'KEVICH, B.S., doktor tekhn. nauk;
ILARIONOV, V.A., kand. tekhn. nauk; POLTEV, M.K., inzh.;
KOGAN, E.I., inzh.; CHIGARKO, G.T., inzh.; KONONOVA, V.S.,
red.

[Traffic safety and safety measures in automotive transportation] Bezopasnost' dvizheniia i tekhnika bezopasnosti na avtomobil'nom transporte. Moskva, Transport, 1964. 74 p.
(MIRA 18:1)

1. Moscow. Gosudarstvennyy nauchno-issledovatel'skiy institut avtomobil'nogo transporta. 2. Moskovskiy avtorekhanicheskiy institut (for Fal'kevich). 3. Moskovskiy avtomobil'no-dorozhnyy institut imeni Molotova (for Ilarionov). 4. Vsesoyuznyy zaochnyy politekhnicheskiy institut (for Poltev).

STETSYUK, L.S.; PARSHIN, M.A.

Organize regular inspection of roughness in surfacing. Avt. dor. 27 no. 3:4-5 Mr '64. (MIRA 17:5)

VIKHOR, A.F., veterinarnyy vrach; PARSHIN, M.A., veterinarnyy vrach.

Perhydrol method of decomposing samples of canned meat. Veterinariia 33 no.8:70 Ag '56. (MLRA 9:9)
(Meat, Canned--Analysis)

PARSHIN, M.A.; SLAVGORODSKIY, V.B.

Operational control of adhesive conditions of pavements.
Avt. dor. 28 no.9[illegible] S '65. (MIRA 18:10)

KUCHEROV, P.M.; BYKOV, L.T.; KARPUZIDI, K.S.; MERLIN, V.M.; KUNITSA, N.K.; KAL'YANOVA, M.L.; PARSHIN, M.I.

Experience with the prevention of tularemia during an extensive epizootic outbreak in rodents. Zhur. mikrobiol. epid. i immun. 29 no.8:3-7 Ag '58. (MIRA 11:10)

1. Iz Ural'skoy protivochumnoy stantsii i Rostovskogo protivochumnogo instituta.

(TULAREMIA, prevention and control,
during extensive epizootic outbreak in rodents (Rus))

PARSHIN, M.M.

Laboratory use of color-impregnated filter papers. Lab.delo 5 no.4:30-32 Jl-Ag '59. (MIRA 12:12)
(FILTERS AND FILTRATION)

PARSHIN, M.Ye.; KRIVTSOV, G.F.; SLEDNEV, I.P., podpolkovnik, red.; MYASNIKOVA, T.F., tekhn.red.

[Privileges, pensions, and aids for servicemen and their families; a handbook] L'goty, pensii i posobiia voennosluzhashchim i ikh sem'iam; spravochnik. Moskva, Voen. izd-vo M-va obor. SSSR, 1958. 259 p. (MIRA 11:5)
(Pensions, Military)

PARSHIN, N., serzhant

Joy and disapointment. Starsh.-serzh. no.5:20 My '63.
(MIRA 16:10)

L 06197-67 FSS-2/EWT(1)/EWP(v)/EWP(t)/ETI/EWP(k) DS/JD/HM

ACC NR: AP6032489 SOURCE CODE: UR/0413/66/000/017/0030/0030

INVENTOR: Alekseyev, F. A.; Balashov, V. A.; Gershonok, M. I.; Grachev, I. M.; Yegorov, B. A.; Kobyl'nitskaya, M. I.; Kozlov, D. A.; Lifshits, A. I.; Mondrus, D. B.; Parshin, N. A.; Rashevskiy, A. L.; Rivkin, A. E.; Tal'gren, A. A.; Khansuvarov, A. A.

ORG: none

TITLE: Device for high frequency soldering of lead-acid storage batteries. Class 21, No. 185368

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, 1966, 30

TOPIC TAGS: metal soldering, storage battery

ABSTRACT: An Author Certificate has been issued for a device for high-frequency soldering of lead-acid storage batteries. The device contains a h-f generator with an external tank circuit, a multiloop inductor with open ferrite magnetic circuits, a conveyor with a lifting table, a control desk, and an assembling-soldering former equipped with a magnetic screen fastened on a non-magnetic base. Orig. art. has: 1 figure.

UDC: 621.352.2:621.791.357:621.3.029.5

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L 06197-67
ACC NR: AP6032489

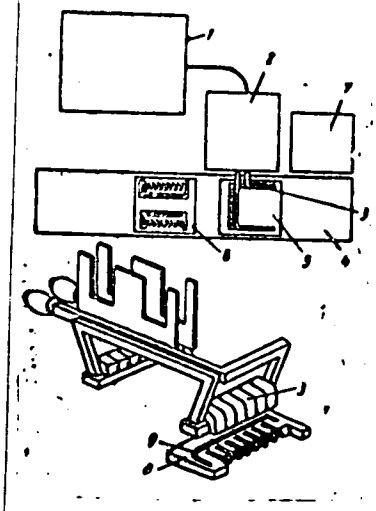

Fig. 1. 1 - H-f generator; 2 - external tank circuit; 3 - inductor; 4 - conveyor; 5 - lifting table; 6 - control desk; 7 - former; 8 - screen; 9 - base.

SUB CODE: 10,13 / SUBM DATE: 24 Mar 65

Card 2/2 afs

PARSHIN, N. G.

USSR / Cultivated Plants. Cereals.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34608

Author : Parshin, N. G.
Inst : AS KazSSR
Title : Variability of Morpho-biological Symptoms in Wheat Under the Influence of Zonal Ecological Conditions.

Orig Pub : Izv. AN KazSSR, ser. biol., 1956, No 11, 23-35.

Abstract : Test zones were located in the mountains of Trans-Iliyskiy Alatau (alt. 1709 m), the foothills (alt. 800 m) and in the Pribalkhashskiy desert. Under mountain conditions, the following results were noted: retardation of development, increase of the vegetative mass, denseness, granulation and intensity of coloration of the spike, as well as mealiness and increase in the

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30(1)

AUTHORS: Parshin, N.S. and Suvorov, N.I.

TITLE: The Transformation of Setaria Italica Into a New Species of Setaria Viridis (Prevrashcheniye setarii v novyy vid shchetinnika)

PERIODICAL: Vestnik Akademii nauk Kazakhskoy SSR, 1958, Nr [illegible], pp 107 - 115 (USSR)

ABSTRACT: This is a report on an experiment carried out by the Laboratory of Darwinism, Department of Botany of the Alma-Atinskiy gosudarstvennyy pedagogicheskiy institut imeni Abaya (Alma-Ata State Pedagogical Institute imeni Abay) to study the influence of various external ecological conditions on the growth of a plant with a previously impaired heredity. The primary material was a specimen of Setaria italica var.m chrysochaeta A.f. supplied in 1946 by the Alma-Atinskaya gosudarstvennaya selektsionnaya stantsiya (Alma-Ata State Selection Station). The experiment can be roughly divided into two stages. During the first stage

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SOV/[illegible]

The Transformation of Setaria Italica Into a New Species of Setaria Viridis

which covers the period 1947 - 1951, the scientists tried to impair the hereditary qualities of the plant, by successive annual sowing of the seeds under special conditions. The plants obtained by this procedure differed in several respects, showing as to their friability even racemes similar to those of Setaria Italica var. longiseta Doell. One cluster, particularly distinguished by friability [illegible] form, was selected and separately threshed. The seeds, however, though differing slightly in size and intensity of scoring, remained typical seeds of the primary plant. During the following three years, these seeds were preserved in the laboratory. After this period, they were used as primary material for the second stage of the experiment, characterized by the development of seeds and plants under various ecological conditions. The seeds were [illegible] a mountain zone (Trans-Ili Alatau), in the cultivated

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The Transformation of Setaria Italica Into a New Species of Setaria Viridis

zone of Alma-Ata and in a desert region south of the Balkhash Lake. The experience was crowned with final success in 1[illegible], when in the cultivation zone of Alma-Ata, six plants were selected from the generation of the new form of Setaria viridis, which had developed from the changed seeds found in the axil[illegible] sters of Setaria Italica. These plants were easily distinguished from the other plants by their large size and the comparatively dark color of their vegetative and generative organs. The descendants of the selected plants showed a great variety in the seed colors, the form of the racemes and other morphological characteristics. The new form of Setaria, in contract to Setaria Italica and Setaria Viridis, starts a great variety of plant forms.

Card 3/4 As was confirmed by [illegible]

The Transformation of Setaria Italica Into a New Species of Setaria Viridis

this form contain much more albumen than the [illegible] mentioned plants: the seeds of Setaria Italica contain 1[illegible].9%, Setaria Viridis - [illegible]% and [illegible] of Setaria - [illegible]%. There are [illegible] tables, [illegible] and 5 Soviet references.

Card 4/4

PARSHIN, N.G.

Variability of morphobiological characters in wheat brought about by zonal ecological conditions. Izv.AN Kazakh.SSr. Ser.biol. no.11: 23-35 '56. (MLRA 10:2)

1. Kafedra botaniki Alma-Atinskogo pedagogicheskogo instituta im. Abaya.
(KAZAKHSTAN--WHEAT)

Name : PARSHIN, N. G.

Dissertation : Effect of zonal ecological conditions on the morphology of the Graminae

Degree : Cand Biol Sci

Defended At : Acad Sci USSR, Inst of Genetics

Publication Date, Place : 1956, Alma-Ata

Source : Knizhnaya Letopis' No 5, 1957

KOLUZAYEV, A.D., inzh.; PARSHIN, N.M., inzh.

Mechanization of the process of brightening aluminum ware.
Mekh. i avtom. proizv. 17 no.8:25-26 Ag '63. (MIRA 16:9)

PARSHIN, O.P., inzh.

Pneumatic coal preparation. Obog.i brik. ugl. no.21:84-96 '61.
(MIRA 16:5)

(Coal preparation) (Pneumatic machinery)

PARSHIN, O.P., inzh.

Using the dry method for the preparation of Inta coals. -Ugol'- (MIRA 15:...
brik. url. no.17:47-58 '61.
(Pechora Basin--Coal preparation)

PARSHIN, P.; LEBEDEVA, A.

Profitable business. Zashch. rast. ot vred. i bol. 10 no.5:10 '65. (MIRA 18:6)

1. Predsedatel' kolkhoza imeni Kalinina, Lotoshinskiy rayon, Moskovskoy oblasti (for Parshin). 2. Starshiy agronom po zashchite rasteniy, kolkhoz imeni Kalinina, Lotoshinskiy rayon, Moskovskoy oblasti (for Lebedeva).

KISELEV, B.A.; PARSHIN, P.F.

Some misinterpretation of results in Fourier-spectrometry
Opt. i spektr. 12 no.2:311-317 F '62. (MIRA 15:2)
(Spectrometry)

PARSHIN, P.F.

Apodization in Fourier spectrometry. Opt.i spektr. 13 no.5:740-745 N '62. (MIRA 15:12)
(Interferometry)

S/051/63/014/002/020/026
E039/E120

AUTHOR: Parshin, P.F.

TITLE: Distortion of the intensity distribution in spectrograms and its dependence on the size of the interferometer outlet aperture when using the Fourier spectrometry method

PERIODICAL: Optika i spektroskopiya, v.14, no.2, 1963, 301-303

TEXT: An estimate of the distortion is given together with suggested methods of calculating it for different methods of apodisation. For a unique interpretation of the intensity distribution in a spectral line of a spectrogram obtained with a known value of Ω it is necessary to introduce a correction coefficient η (Ω is the solid angle of the outlet aperture). The apparatus function is determined from Ω and the resolving power of the interferometer using the formulae:

$$\Omega = \pi i_m^2, \qquad i_m = \frac{D}{2f}$$

where: D is the aperture diameter; f is the focal length of the

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Distortion of the intensity ...

objective, $(\Delta\nu)_0 = 1/2L$, where L is the maximum path difference between the interfering beams. After calculating $\varphi(\omega', 0)$ it is sufficient to multiply by δv to obtain the function $B^*(\nu')$ which is the spectral intensity in the wave number scale ν, v being the velocity of displacement of the mirrors. It is shown that the influence of the outlet aperture is to weaken the intensity of spectral lines on the high frequency side. Without the use of the correction coefficient comparison of work by different authors is difficult. The wave number of the distortion depends not only on the method of apodisation, but also on the choice of Ω and L.
There are 3 figures.

SUBMITTED: July 2, 1962

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ACCESSION NR: AP4020965 S/0051/64/016/003/0507/0512

AUTHOR: Parshin, P.F.

TITLE: Signal-to-noise ratio in spectra obtained by the Fourier spectrometry method

SOURCE: Optika i spektroskopiya, v.16, no.3, 1964, 507-512

TOPIC TAGS: signal-to-noise ratio, infrared spectrometry, Fourier spectrometry, noise in spectrometry, noise in spectrograms, noise in interferograms

ABSTRACT: In recording radiation by means of thermal detectors the noise level in the detector does not depend on the strength of the incident flux. In such cases it is expedient to employ Fourier spectrometry and here evaluation of the thermal noise level becomes important. J.Connes (Rev.d'Optique, 40,116,171,1961) investigated the distortion introduced into the spectrogram or interferogram by thermal "white" noise; to evaluate the signal-to-noise ratio Connes took as the source the model of an infinitely narrow line. The shortcoming of this expedient is that the results cannot be applied to absorption spectra and wide-band emission spectra. The present paper is a continuation of theoretical analysis of the problem, but utilizing as

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Parshin, P.F.

L 41182-65 EWT(d)/EWP(c)/EWP(v)/T/EWP(k)/EWP(l) Pf-4
ACCESSION NR: AP5004677 S/0115/64/000/009/0058/0059

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B

AUTHOR: none

TITLE: Fourth scientific and technical conference on "Cybernetics for the improvement of measurement and inspection methods"

SOURCE: Izmeritel'naya tekhnika, no. 9, 1964, 58-59

TOPIC TAGS: cybernetics, electric measurement, electric quantity instrument, digital computer, electronic equipment, electric engineering, conference

ABSTRACT: The conference was held 1-4 July at the All-Union Scientific Research Institute of Metrology by the Section of Electrical Measurements of the Council on the Problem of "Scientific Instrument Making" of the State Committee on Coordination of Scientific Research Work in the USSR together with the All-Union Scientific Research Institute of Electrical Measurement Instruments and the Leningrad Regional Administration of the Scientific and Technical Division of the Instrument Making Industry. More than 400 delegates from 29 cities of the country participated. Fifty-seven reports were heard and discussed. Reports were given by: P. V. NOVITSKIY (Leningrad)--"Definition of the Concept of Informational Error in Measurement and its Importance in Practical Use" and "On the Problem of the Average Informational Criterion of Accuracy Throughout the Entire Scale of an Instrument"; Ya. A.

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KUPERSHMIDT (Moscow)--"On Determination of the Criteria of Accuracy for Measurement Devices"; S. M. MANDEL'SHTAM (Leningrad)--report on a new criterion of accuracy of measurement instruments; P. F. PARSHIN (Leningrad)--report on optimization when using Fourier transforms on electronic digital computers; S. P. DMITRIYEV, G. Ya. DOLGINTSEVA and A. A. IGNATOV (Leningrad)--proposal of a new method for solving problems of optimum filtering for non-stationary random signals and interference; I. B. CHELPANOV--"Calculation of the Dynamic Characteristics of an Optimum Complex Two-Channel System which Uses Signals from a Position Meter and from a Speed Meter"; R. A. POLUEKTOV (Leningrad)--"Optimum Periodic Correction in the Measurement of Continuous Signals"; S. P. ADAMOVICH (Moscow)--"Analysis and Construction of Devices for Correction of Non-linearity and Scaling for Unitary Codes; G. V. GORELOVA (Taganrog)--"A Method for Statistical Optimization in Graduating the Scales of Electrical Measuring Instruments"; M. A. ZEMEL'MAN (Moscow)--"Analog-Digital Voltage Converter with Automatic Error Correction"; B. N. MALINOVSKIY, V. S. KALENCHUK and I. A. YANOVICH (Kiev)--"Automatic Monitoring of the Parameters of the Electrical Signals of Complex Radio and Electronic Equipment"; V. P. PEROV (Moscow)--"Operational Cybernetics as an Independent Scientific Specialization"; Ye. N. GIL'BO (Leningrad)--"On the Problem of Effective Non-linear Scales"; A. I. MARKELOV (Moscow)--"Devices for Preliminary Processing of the Results of Measurements Presented in the Form of

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Graphic Recordings For Subsequent Introduction of the Information into Universal Digital Computers"; O. M. MOGILEVER and S. S. SOKOLOV (Leningrad)--"On a Method for Reducing Excess Information"; T. V. NIKOLAYEVA (Leningrad)--"A Device for Temporal Discretization of Continuous Signals"; A. A. LYOVIN and M. L. BULIS (Moscow)--"Optimization of the Transmission of Telemetric Information as a Means for Raising the Efficiency and Eliminating Interference"; D. E. GUKOVSKIY (Moscow)--"On a Statistic Approach to the Detection of Events in Automatic Inspection"; M. I. LANIN (Leningrad)--"Method for Calculating the Holding Time of Communications in a Centralized Inspection System or Constant Servicing Time"; O. N. BRONSHTEYN, A. L. RAYKIN and V. V. RYKOV (Moscow)--"On a Single-Line Mass Service System with Losses"; V. M. SHLYANDIN (Penza)--report on circuit designs for direct compensation electrical digital measuring instruments; A. N. KOMOV (Novocherkassk)--report on a new method for compensation of digital bridges; M. N. GLAZOV (Leningrad)--report on the problem of voltage-to-angular rotation conversion; V. S. GUTNIKOV (Leningrad)--"Methods for Construction of Frequency Capacitance Pickups with a Linear Scale"; R. Ya. SYROPYATOVA and R. R. KHARCHENKO (Moscow)--report on the determination of the amplitude-frequency and phase characteristics of PFM and PWM modulators; Ye. I. TENYAKOV (Novocherkassk)--"The Phototransistor as a Switch for Electrical Measurement Purposes"; N. V. MALYGINA (Leningrad)--a report on ways for making universal equipment for measurement of current, voltage and power; P. P. ORNATSKIY and V. I. ZOZULYA (Kiev)--reports on the construction of static voltmeters, wattmeters and

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phase meters; A. V. TRIKHANOV, I. G. SMYSHLYAYEV, N. I. BABLIN, V. M. RAZIN and V. A. GORBUNOV (Tomsk)--report on a device for automatic processing of the measurements of vibration amplitude of pneumatic hammers; L. K. RUKINA and V. G. KNORRING (Leningrad) --report on the development of a digital compensator for measuring pressure, force, etc.; N. B. DADUKINA (Leningrad)--report on a method for constructing frequency pickups for gas analysis; Ye. M. KARPOV, V. A. BRAZHNIKOV and B. Ya. LIKHTTSINDER (Kuybyshev)--reports on analysis and recording of boring speeds; Yu. V. PSHENICHNIKOV (Kuybyshev)--"A High Speed Voltage-to-Digital Code Converter for ac Pickups"; G. P. VIKHROV and V. K. ISAYEV (Vilna)--"A Highly Accurate Digital Peak-to-Peak Voltmeter"; and S. M. PERSIN (Leningrad)--"A Low Level Analog-Digital Voltage Converter."

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EE, EC

NO REF SOV: 000 OTHER: 000 JPRS

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